IN THE CLAIMS:

Please amend the claims as set forth below:

1. (Currently Amended) A distributed simulation system comprising:

a plurality of nodes, wherein each node of the plurality of nodes comprises a
simulator and is configured to simulate a different ~~portion~~ component of a
system under test using the simulator, and wherein each node is
configured to perform a simulation as a series of timesteps, wherein a
timestep is a granule of simulation time by which the simulator advances
the simulation of the component, and wherein a simulation of the system
under test comprises the plurality of nodes simulating the components;

wherein a transition between timesteps in the plurality of nodes is synchronized.

2. (Original) The distributed simulation system as recited in claim 1 wherein the plurality
of nodes are coupled to communicate with each other, and wherein each of the plurality
of nodes determines that other nodes of the plurality of nodes are capable of completing a
timestep to synchronize the transition between timesteps.

3. (Original) The distributed simulation system as recited in claim 1 further comprising a
hub coupled to the plurality of nodes, wherein the hub is configured to synchronize the
transition between timesteps.

4. (Original) The distributed simulation system as recited in claim 3 wherein each node
of the plurality of nodes is configured to transmit a first command to the hub indicating
that the node is capable of completing a first timestep.

5. (Original) The distributed simulation system as recited in claim 4 wherein the first
command is a no-operation command.

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6. (Original) The distributed simulation system as recited in claim 4 wherein the hub is configured to transmit a second command to each node of the plurality of nodes in response to receiving the first command from all nodes, and wherein each node is configured to transition to the next timestep in response to the second command, whereby the transition is synchronized.

7. (Original) The distributed simulation system as recited in claim 6 wherein the second command is a predefined command transmitted to each node.

8. (Original) The distributed simulation system as recited in claim 6 wherein the hub is configured, if at least one command which is not the first command is received from the plurality of nodes, to transmit commands other than the second command to each node.

9. (Original) The distributed simulation system as recited in claim 8 wherein each node of the plurality of nodes is configured to iterate evaluating events within the first timestep in response to receiving a command other than the second command.

10. (Original) The distributed simulation system as recited in claim 1 wherein each timestep comprises at least a first phase and a second phase, and wherein a transition between each phase is synchronized in the plurality of nodes.

11. (Currently Amended) A method comprising:

> evaluating events within a first timestep in a plurality of nodes, each of the plurality of nodes simulating a different ~~portion~~ component of a system under test and configured to perform a simulation as a series of timesteps in a simulator, wherein a timestep is a granule of simulation time by which the simulator advances the simulation of the component, and wherein a simulation of the system under test comprises the plurality of nodes simulating the components; and

synchronizing a transition in the plurality of nodes from the first timestep to a

second timestep.

12. (Original) The method as recited in claim 11 wherein the synchronizing comprises:

receiving a first command from each node of the plurality of nodes indicating that

the node is capable of completing the first timestep; and

transmitting a second command to each node of the plurality of nodes in response

to the receiving, wherein each of the plurality of nodes is configured to

transition to the second timestep in response to the second command.

13. (Original) The method as recited in claim 12 wherein the first command is a no-operation command.

14. (Original) The method as recited in claim 12 wherein the second command is a predefined command transmitted to each of the plurality of nodes.

15. (Original) The method as recited in claim 12 further comprising, in response to receiving at least one command which is not the first command from one of the plurality of nodes, transmitting commands other than the second command to each of the plurality of nodes.

16. (Original) The method as recited in claim 15 further comprising iterating the evaluating in at least one of the plurality of nodes in response to receiving a commands other than the second command.

17. (Original) The method as recited in claim 11 wherein the first timestep includes at least a first phase and a second phase, wherein the synchronizing comprises synchronizing a transition between the first phase and the second phase.

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18. (Currently Amended) A ~~carrier~~ computer readable medium comprising instructions which are executable to:

receive a first command from each of a plurality of nodes, each of the plurality of nodes comprising a simulator and simulating a different ~~portion~~ component of a system under test using the simulator, wherein each of the plurality of nodes is ~~and~~ configured to perform a simulation as a series of timesteps, wherein a timestep is a granule of simulation time by which the simulator advances the simulation of the component, and wherein a simulation of the system under test comprises the plurality of nodes simulating the components; and

synchronize a transition in the plurality of nodes from a first timestep to a second timestep in response to receiving the first command from each of the plurality of nodes.

19. (Currently Amended) The ~~carrier~~ computer readable medium as recited in claim 18 wherein the instructions are executable to synchronize the transition by transmitting a second command to each of the plurality of nodes.

20. (Currently Amended) The ~~carrier~~ computer readable medium as recited in claim 19 wherein the instructions are executable to transmit commands other the second command if at least one command other than the first command is received from the plurality of nodes.

21. (Currently Amended) A ~~carrier~~ computer readable medium comprising instructions executable to:

transmit a first command to a hub if a node that is simulating a component of a system under test is ready to transition from a first timestep to a second timestep in a simulator, wherein a timestep is a granule of simulation time

by which the simulator advances the simulation of the component, and wherein a simulation of the system under test comprises the plurality of nodes simulating the components; and

transition to the second timestep in response to receiving a second command from the hub.

22. (Currently Amended) The ~~carrier~~ computer readable medium as recited in claim 21 wherein the instructions are further executable to evaluate a plurality of events within the first timestep prior to transmitting the first command.

23. (Currently Amended) The ~~carrier~~ computer readable medium as recited in claim 22 wherein the instructions are further executable to iterate evaluating events within the first timestep subsequent to transmitting the first command if a command other than the second command is received from the hub.